REMARKS

The following Remarks are made in response to the Final Office Action mailed December 16, 2003. Claims 1-53 were rejected. With this Response, no claims have been amended. Claims 1-53 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 103

The Examiner rejected claims 1-4, 9-11, 15, 16, 22, 29-33, 41, 42, and 46 under 35 U.S.C. § 103(a) as being unpatentable over the Miller et al. U.S. Patent No. 6,151,696 in view of the Nessett et al. U.S. Patent No. 5,968,176 in further in view of the Van Loo et al. U.S. Patent No. 6,064,672.

Applicant respectfully submits that not all limitations of independent claims 1 and 29 are taught or suggested by the cited references. In particular, claim 1 includes "multiple source and destination resources (SDRs), each SDR implementing a reliable transport service between the source device and a corresponding one of the multiple destination devices in the multicast group for delivery of the first unit of work stream at the corresponding destination device." Independent claim 29 includes "establishing multiple reliable transport services, each reliable transport service being established between the source device and a corresponding one of multiple destination devices participating in the multicast group."

The Miller et al. patent does not teach or suggest multiple SDRs, wherein each SDR implements a reliable transport service between the source device and a corresponding one of multiple destination devices as recited in independent claim 1 or establishing multiple reliable transport services, each being established between the source device and a corresponding one of the multiple destination devices, as recited in independent claim 29. The Miller et al. patent describes reliable communications between a source and multiple destination devices in a multicast group using a scheme involving the destination devices sending negative acknowledgements (NAKs) to the source to indicate failed receipt of transmitted information. In response, the source device re-transmits the un-received information in multicast mode to all destination devices. Destination devices that had previously received any of the re-transmitted information in an earlier pass simply ignore any redundant re-transmissions. To

the extent the Examiner takes the position that the Miller et al. patent teaches each destination device having its own resource for reliable transport service (e.g., the NAK mechanism), Applicant respectfully points out the Miller et al. patent fails to teach multiple resources at the source device, each related to a corresponding resource at each individual destination device, for carrying out the reliable transport service. Therefore, the limitation of claim 1 of multiple source and destination resources (SDRs), each SDR implementing a reliable transport service between the source device and a corresponding one of the multiple destination devices is not taught or suggested by the Miller et al. patent. Likewise, the limitation of claim 29 of establishing multiple reliable transport services, each reliable transport service being established between the source device and a corresponding one of multiple destination devices, as claimed in claim 29, is not taught or suggested.

In the Final Office Action, the Examiner has pointed out in paragraph 67 that the Miller et al. patent teaches the use of the TCP/IP protocol, as well as ICMP, ping, and a "multicast ping." In response, Applicant respectfully submits that these functions are not reliable transport services. For example, as regarding ping, or multicast ping, these functions provide connectivity and data round trip time information. Conversely, reliable transport services facilitate transmission/communication of information without data loss. Although ping or multicast ping provide information about a given transmission channel, these functions do not facilitate reliable transmission/communication of information without data loss as performed by the reliable transport services recited in claims 1 and 29.

The Miller et al. patent also describes the use of "speed groups," wherein based on determined transmission capacity to each destination device, transmission to the destination devices can be arranged such that slower communicating devices receive less information. This feature described in the Miller et al. patent also does not teach or suggest establishing or implementing a reliable transport service between the source device and a corresponding one of the multiple destination devices in the multicast group, as recited in independent claims 1 and 29.

The Van Loo et al. patent discloses a reliable transport scheme in ringlet networks that employs strong sequential ordering (SSO). To achieve the SSO, the Van Loo et al. system employs certain characteristic features of ringlet networks. In particular, SSO is achieved by a source device in the ringlet indicating a sequence number in each transmitted

packet, and the destination devices participating in the SSO scheme keeping track of the sequence numbers in the received packets such that an out-of-sequence packet is identifiable. If an error is identified, all packets received subsequently to the last good packet must be re-transmitted to the destination devices in the ringlet. Applicant respectfully points out relevant language in the Van Loo et al. patent beginning at col. 12, line 6, "Fundamental to the proposal is the assumption that *local ringlet transmission is unidirectional and bypasses no nodes*. . . .[a ringlet employing an optional short cut routing feature] would not support SSO ordering."

Although the Van Loo et al. patent discloses the use of SSO for reliable transport, this reference does not teach or suggest multiple SDRs, each SDR implementing a reliable transport service between the source device and a corresponding one of the multiple destination devices in the multicast group, as recited in claim 1, or establishing multiple reliable transport services, each reliable transport service being established between the source device and a corresponding one of multiple destination devices participating in the multicast group, as recited in claim 29. By contrast, the Van Loo et al. patent teaches essentially a singular transport service such that, as stated beginning at col. 13, line 64, "Once [an error] is detected at the producer node, the SSO state values maintained for this producerId at every node in the ringlet are in question. Each ringlet node's SSO state information for this producerID must be reset, without any change in either the SSO programming space for this producerId or for any other producer node."

In view of the above, Applicant respectfully submits that the invention claimed in independent claims 1 and 29 has not been taught or suggested by any of the cited references, or any combination thereof. Therefore, independent claims 1 and 29 are believed to be in condition for allowance. Furthermore, as dependent claims 2-28 further define patentably distinct independent claim 1, and dependent claims 30-53 further define patentably distinct independent claim 29, these dependent claims are also believed to be allowable.

Therefore, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. §103(a) rejections to claims 1-53, and request allowance of these claims.

CONCLUSION

In view of the above, Applicants respectfully submit that pending claims 1-53 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-53 is respectfully requested.

No fees are required under 27 C.F.R. 1.16(b)(c). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 08-2025.

The Examiner is invited to contact either the Applicants' representative at the below-listed telephone number or William J. Streeter, Esq. at Telephone No. (970) 898-7247, Facsimile No. (970) 898-3886 to facilitate prosecution of this application. In addition, all correspondence should continue to be directed to the following address:

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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 17th day of February, 2004.

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